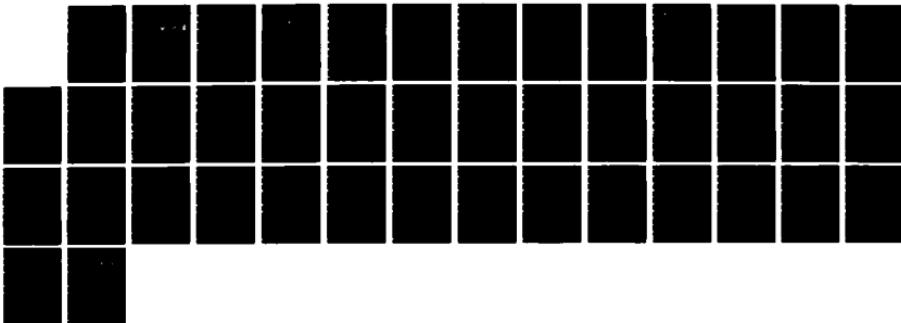


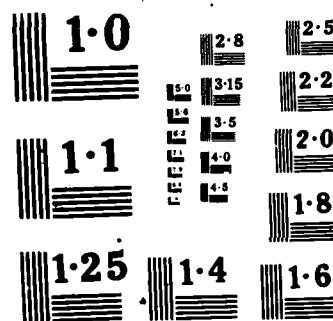
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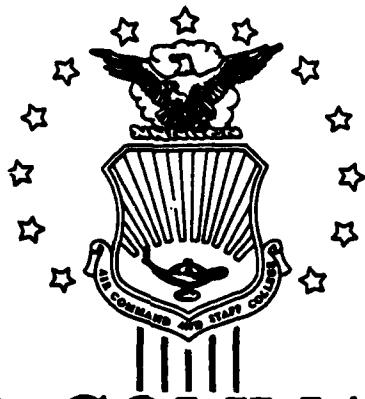


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# AIR COMMAND AND STAFF COLLEGE



## STUDENT REPORT

PERSONAL PROPERTY MOVEMENT- A  
QUALITY PROBLEM AT BASE LEVEL

MAJOR WILLIAM B. UMSTAEDTER 86-2575  
*"insights into tomorrow"*

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**TITLE** PERSONAL PROPERTY MOVEMENTS-A QUALITY PROBLEM AT  
BASE LEVEL

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Submitted to the faculty in partial fulfillment of  
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## PREFACE

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The government has long maintained a policy of contractors providing quality control for products and services delivered to our Armed Forces. Many studies have shown that more often than not, these same contractors rely almost entirely on the Services to provide feedback on poor performance, correcting only what service inspectors detect. Attempts to recover damages through legal action were usually unsuccessful. In the early 80's, the Services changed contracting methodology and introduced the Performance Work Statement. This turned the tide in the courtroom. Concentrating on performance output rather than contractor procedure, the program can now determine where the contractor failed and to what extent the government is entitled to recoup damages.

*AFR 400-28 embodies the new contract methodology, and its use is required for any service contract which exceeds \$10,000. When applied to the movement of service member personal property, the ensuing changes created burdens for base level quality assurance personnel which had never before been experienced. Complaints have been voiced to the Air Staff concerning loss of authority, inflexibility and increased paperwork requirements. This paper attempts to find remedies, within the context of the current methodology, to remove these burdens being experienced at the local level.*

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## ABOUT THE AUTHOR

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Major William Bruce Umstaedter graduated from the University of Tennessee in 1972, earning a degree in Transportation Management. He entered the Transportation Corps of the US Army, attending both the basic and advanced Transportation Corps officer courses. Later, he received a Masters in Business Administration from the Florida Institute of Technology. He has worked for five years in aviation maintenance; the last three of those dealing directly with the problems of contractor quality control and assurance. Finally, Major Umstaedter had two years of experience in combat development planning. This included working with contractors and DA-level staff at defining measurable, acceptable performance standards for a US Army aviation weapon system.

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## EXECUTIVE SUMMARY

Part of our College mission is distribution of the students' problem solving products to DoD sponsors and other interested agencies to enhance insight into contemporary, defense related issues. While the College has accepted this product as meeting academic requirements for graduation, the views and opinions expressed or implied are solely those of the author and should not be construed as carrying official sanction.

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REPORT NUMBER 86-2375

AUTHOR(S) MAJOR WILLIAM B. UMSTAEDTER

TITLE PERSONAL PROPERTY MOVEMENT-A QUALITY PROBLEM AT BASE LEVEL

I. Purpose: The purpose of this study is to identify means to alleviate burdens being experienced by base level transportation quality assurance personnel operating under AFR 400-28.

II. Problem: In 1979, the Air Force introduced Air Force Regulation 400-28, Base Level Service Contracts. Since that time, the Air Staff has continued to receive complaints from the field concerning the burdensome nature of executing the regulation's required quality assurance program. Three areas of concern are prevalent: the loss or reduction of management authority, the rigidity and inflexibility of the surveillance means provided, and the increased paperwork required to document the program.

III. Data: The government has long maintained a policy of contractors providing quality control for products and services delivered to our armed forces. Study after study has shown, more often than not, the same contractors have relied almost entirely on service inspectors to identify poor performance. The transportation industry has been no exception. Over time, quality in the industry has decreased. The Services have attempted to recoup losses through the courts, but their

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successes have been limited. The Service's contracting methods were to blame for these courtroom failures.

Deregulation of the trucking industry was also impacting the service's attempts to improve quality. Many new firms arrived on the scene to gain a portion of the government's personal property movement business. Most of these firms were small independents who had not been in business prior to deregulation. Quality to them was just a vague paragraph in their contract. Business continued as usual. They continued to rely on government inspectors to point out their problems. During deregulation, the government's successes in the courtroom did not improve.

In the late 70's, the Air Force introduced and tested Performance Work Statement contracts. These contracts concentrated on identifying contractor output instead of procedure. Specific actions could be taken against contractors failing to meet the stated performance. After their introduction, the service's legal problems evaporated.

The test of Performance Work Statement contracts was so successful that the Air Force incorporated the results into a regulation, AFR 400-28, and introduced it throughout the United States. The regulation caused sweeping changes for base level quality assurance personnel. They no longer controlled their programs. The regulation did that for them. Management authority was reduced. The surveillance system provided was rigid and inflexible and the paperwork required to support the program overwhelmed the local offices. These same circumstances exist today. The program has been a tremendous success from a service point of view, but personnel at the local level still struggle to cope with the new requirements.

**IV. Conclusions:** Government policy of contractors providing quality control for services delivered has not changed significantly in the past forty years. For their part, contractors have relied on the government to inform them if they were not performing to the required standard. Introduction of the Performance Work Statement contract by the Air Force provided the necessary weapon to combat poor contractor performance. The program has been a complete success in that regard. But

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this has not been the case at the local level. The burdens identified earlier have not been overcome. These burdens impact the morale and efficiency of the very personnel the Air Force depends on to make this system work. Change is required, but not at the expense of the gains which have been achieved.

**V. Recommendations:** Three recommendations are offered to alleviate the burdens being experienced by local quality assurance personnel. The first of these is an education and information program. Consisting of video presentations and regional workshops, the program is designed to improve morale of the local employee and show managers that they are in charge of their programs; not merely at its mercy. The second recommendation is the introduction of a customer surveillance system. Designed to be used in conjunction with the current system of surveillance, the customer surveillance offers new flexibility at the local level. It also provides management new capability and options. The last recommendation is to automate the base level quality office. This should provide more efficiency in handling office files and reduce actual paperwork required to support the program.

## CHAPTER I

### INTRODUCTION

In 1979, the Air Force introduced Air Force Regulation 400-28, Base Level Service Contracts. Since that time, the Personal Property Movement Division at the Department of the Air Force has continued to receive complaints from the field concerning the burdensome nature of executing the regulation's required quality assurance program. The purpose of this study is to seek possible means to reduce the burden for quality assurance personnel at the local level. Recommendations made must support current contracting philosophy and methodology. That is, they must fit within the framework of a Performance Work Statement (PWS) contract and be legally supportable in a court of law.

### BACKGROUND

Contemplation of the problem without first examining the transportation system would not allow a proper perspective of the issue at hand. For the sake of brevity, this study will only examine the industry's size, its regulatory history, and the Department of Defense's interface with respect to personal property movements.

The transportation system of the United States has long been referred to as this nation's cardiovascular system. It is no less important to the Department of Defense, the single largest customer in the system (6:24). As an industry, it accounted for \$680 billion in expenditures in 1983, an amount equivalent to 23 percent of the Gross National Product (5:83). It is also an industry which is expected to grow at an alarming rate. Ton miles moved by the year 2000 are expected to increase by more than 175 percent (5:83). And, until this decade, it was a highly regulated industry providing a stable environment for our defense traffic managers to carry out their tasks of moving our personnel and their property. This all changed during the Carter administration when deregulation was introduced to the industry.

The introduction of deregulation saw the most dramatic change ever experienced by this nation's transportation sys-

tem. It also added the greatest challenges ever faced by our traffic managers. Some of these challenges have been viewed positively by participants in the industry and others have had destabilizing effects.

For the Department of Defense traffic manager, at least initially, deregulation has been a mixed bag. On the positive side, ease of entry has meant a larger pool of carriers available to serve the Department of Defense. Since 1980, for example, the number of motor freight carriers competing for defense traffic has increased 50 percent to 3500 carriers. Overall, the Military Traffic Management Command now deals with more than 6800 individual carriers and contractors.

This increased competition has yielded substantial transportation cost avoidances, even in a highly inflationary economy. Cost avoidance for all modes in FY 81 and FY 82 respectively were \$103.9 million and \$190 million. While the depressed economy has undoubtedly helped reduce or at least stabilize rates, the MTMC believes that the competitive market place has been the primary determinant in lowering cost (6:24).

But an aside to the upbeat picture portrayed above, some of the very advantages resulting from deregulation brought with them complex problems with which the traffic manager has had to contend.

As the trend toward deregulation continues, the Military Traffic Management Command foresees problems resulting from eased carrier entry and exit requirements. The potential for financial instability, rail line abandonment, decreased service to remote areas, and deteriorating quality of service to name just a few.... (5:25,26)

As indicated above, the verdict on deregulation is still out. For the purposes of this study, it is sufficient to show the dramatic changes taking place in the industry since the beginning of the 80's; changes which are still impacting the industry and the traffic managers operating within it. It shows that the military services, as its largest customer, have not been exempt from the ups and downs brought about by deregulation.

The Department of Defense's interface with the industry is carried out by the Military Traffic Management Command (MTMC). This command, through the various traffic managers

at bases and post around the world, tackles the enormous task of keeping our forces in motion. The Personal Property Director of MTMC oversees a \$1.4 billion program executing over 800,000 household goods movements a year. They serve the 50 states, 90 foreign countries, as well as all U.S. embassies abroad. Execution of the program is accomplished through just over three hundred offices located around the world (2:2). This decentralized system requires local traffic managers to daily make decisions on movements stretching the full width and breadth of the world. This is an industry, which until recently, had been predictable due to its stringent regulation, but today finds itself bound in the complexity of deregulation. It is an industry which requires the MTMC, through the local traffic managers, to make decisive decisions to insure that service members receive the highest quality service available at a price affordable to the Department of Defense.

#### Prelude To The Problem

Ask a base or post traffic manager his concerns when moving a service member's personal property, and he will probably list three: that the property is picked-up on time, delivered on time, and delivered with minimal damage (14:--). These are the same items which have presented the various services and the Military Traffic Management Command with their greatest problems. Those problems were quality of service and recouping damages when quality was judged inferior. The Military Traffic Management Command and the services were not naive enough to expect every shipment to arrive undamaged. But over the years, the trend in quality associated with personal property movements was down. It had reached the point where of the 800,000 household goods shipments being made annually, over a third were resulting in a paid claim (2:6). The services and MTMC fought back through the courts to recoup losses, but in most cases they lost (12:--).

Finding the situation untenable, the Military Traffic Management Command started to fight back in the decade of the 70's. They undertook several new programs to raise the level of service industry-wide. The programs introduced were devised to provide a system which would allow the measurement of a carrier's overall performance. Two such programs were initiated: the Carrier Evaluation Reporting System (CERS) for domestic shipments, and the Required Delivery Date and International Through Government Bill of Lading Quality Program for international movements (2:5). These programs have been highly successful. In FY 85 alone, one sees the Military Traffic Management Command and the services eliminating 1156 carriers providing personal property movements for the govern-

ment (2:6). But, these programs did not provide any improvements when cases were pursued through the courts, because both these systems were designed to deny carriers future government business. Our contracting methods were still such that a contractor could avoid prosecution by delaying until the term of the contract, usually a year, had expired. Or, when the government did manage to get a case to court, contractors usually won because our contracts were not clear or specific on the issue of quality (12:--).

In 1978, a new contracting method was tested at Maxwell Air Force Base, Alabama. Its purpose was to correct, once and for all, the problem of recouping damages from contractors whose performance had been judged insufficient by quality assurance personnel (12:--). This new contracting method was called Performance Work Statement (PWS). It was considered somewhat radical as an approach, because this methodology had not been widely attempted in the service sector. In fact, about the only use for this type of contract had been small ventures such as janitorial services. The test was judged a huge success. MTMC and the services entered the decade of the 80's with a contracting system and quality assurance program which allowed them to eliminate poor performers. And of paramount importance, it would withstand the test of law (11:26).

Until now, this paper has concentrated on the problems encountered by the Department of Defense combating poor quality service and recouping damages when the quality of service was judged inadequate. The introduction by MTMC of their quality control programs of the seventy's solved, or at least abated, the downward trend of quality. More importantly, the successful test of PWS contracting appears to have solved the problems of recouping damages. As one traffic manager put it, PWS is a contract which provides the traffic manager a 'hammer' for the first time in history. It is indispensable in dealing with local contractors (14:--). But rarely does anything provide a cure-all, and PWS has created situations which actually impact on its very successes. These problems are the burdens created by the new system for base quality assurance personnel charged with executing the program at the local level.

#### Significance of the Problem

As PWS contracting evolved, a system of quality control and assurance evolved with it. Incorporated in Air Force Regulation 400-28, the system is required for any service contract in excess of \$10,000 (8:1). At the local level, this

caused sweeping changes in their operations. Complaints were being voiced. Those which have persisted deal primarily with three areas: management flexibility, virtual dictation of random sampling for determining inspection requirements, and the extensive paperwork required to support the program. It appears a paradox has developed. The very system developed to solve the problems being experienced by the services has caused a new set of problems which threaten to impact the very successes the program has enjoyed to date.

#### Objective

The objective of this study is to determine possible means for reducing or removing the burdens imposed by AFR 400-28 at the local quality assurance level. Toward that end, the study will examine the key ingredients of a Performance Work Statement contract. This will be followed by examining government policy for quality control, key provisions of AFR 400-28, and the specific complaints which have persisted since the regulation was introduced. Finally, based on the information presented, conclusions will be drawn and recommendations made.

#### Scope

Although the results of this report may have application to other Department of Defense agencies, the effort is being conducted at the request of the Personal Property Movement Division of the Department of the Air Force, and results released to others will be at their discretion.

## CHAPTER II

### PERFORMANCE WORK STATEMENT - WHAT IT IS AND DOES

In the simplest terms, Performance Work Statement (PWS) is a new methodology used in writing service contracts. The methodology is based on the concept that the Government must be able to define and measure the degree of quality it wants (14:27). The key ingredients of the PWS are the Statement of Work (SOW) and the Quality Assurance Plan. This contracting method allows the contracting officer to specify acceptable outcomes or acceptable payments or a range of outcomes and payments based on performance. Formulas may be included to compute penalties for non-performance to the stated standard (8:1). In formulating these contracts, a systems approach called job analysis is performed.

As indicated above, the design of the SOW and surveillance plan is based on a systematic analysis of the service to be placed under contract or which is already under contract. The analysis assumes that an operation is a system because it consists of a job or combination of jobs carried out by people or machines to achieve a certain purpose (9:5). There can be many parts to the system, but more often than not, they are reduced to four: input, work, output, and control loops. As an example, the Air Force may be contemplating contracting a base service such as transportation of personal property. The job analysis process would go something like:

The first step is to analyze the existing organization and the services it provides. Through using tree diagrams, major jobs are divided into parts and subparts and analyzed to identify inputs, work elements, and outputs. Additionally, analysis is done to determine how often these various services will be performed during the contract term, and what physical and human resources will likely be required. Performance analysis results in defining standards, methods of measurement, and acceptable quality levels. Estimates are made of the contractor's cost of performing each of the services. These

amounts become the basis for deductions to be made for non-performance or unsatisfactory performance (11:27-28).

The outcome of this process is a contract that clearly states the minimum requirements of the Government. It is a document that focuses on output performance rather than contractor procedures. By staying away from procedures, it allows the government to avoid implicit guarantees. It allows the government to avoid claims by a contractor that he was following a directed procedure when performance is the issue. By simply specifying the desired performance output and associated quality standards, responsibility is now placed on the contractor to determine procedures which will produce the desired outputs (11:27).

Performance is only half the equation. The other important part of the PWS contract is the quality assurance role. Although this element will be examined in greater detail in a later chapter, it is important to understand its contribution to the contract methodology.

Under past contracting methods, quality assurance was the result of an inspector observing a contractor's operation and filing a report. In most instances, the report was based on the inspector's 'opinions' as he viewed an operation. Often as not, he was comparing the contractor being inspected against another he had recently inspected. He established his own standards and expected the contractor to know what these were. Seldom would one find anything in writing to support the inspector's criteria. Of course, when taken to court, the government could not support findings made arbitrarily by its inspectors. With PWS, this is no longer the case. Regulations require all government inspectors be trained before operating under a PWS contract. Additionally, by placing performance into virtually every part of the contract, the inspector no longer has to rely solely on his opinions. When judgement must be exercised, the inspector may refer to stated standards which allows the removal of guesswork from the job.

### Summary

In summarizing this chapter, the reader should take away the methodology employed in writing a Performance Work Statement contract and what it accomplishes. The methodology, called job analysis allows a contracting officer to separate a contracted service into many smaller jobs and through analysis assign these a performance standard which can be measured.

By employing this methodology, it provides a contract which should be easily understandable for the contractor and a contract which the government will find enforceable. Finally, by tying quality assurance to performance, it provides an inspector the tools required to make a fair judgement of services rendered. Subjectivity is removed from the process.

## CHAPTER III

### THE QUALITY ENVIRONMENT

The quest for high quality goods or services within the Department of Defense and the Air Force is not a new endeavor. In fact, the services have always demanded such standards from the firms with whom they do business. Through the years many regulations and policies have been developed to ensure proper service. However, technological improvements and manpower limitations have forced additional changes (1:28).

Unfortunately, the old adage about roads paved with good intentions probably applies more often than not to the movement services to the Government. Until the early 1980's, most quality programs operated by the Armed Forces in the area of personal property movements were written in hollow, unenforceable contract language (10:23). The inspection arm of the services was fighting an uphill battle with outdated weapons.

This is not to imply that the Air Force or its personnel have been negligent in their duties. Quite the contrary. Most are dedicated individuals with many years of experience. The problems evolved with changes which have occurred in the government's approach to quality control over the past forty years.

#### Government Quality Evolution

Post World War II advances in technology, coupled with a decreasing manpower pool, caused marked changes in quality control techniques used to ensure industry's compliance with contract specifications. The Air Force, emerging as a new arm of the Defense Department, faced these problems and coped in a manner similar to the entire defense organization (1:28).

Industry applied the systems approach to confront early quality control problems. It required many checks along the path of production. By employing such measures, probabilities of products, or in our case, services, not

meeting contract specifications were greatly reduced. Thus, the Government had a high degree of confidence that the products being delivered were of the quality desired. During this period government quality inspectors most often worked in conjunction with industry personnel. We had moved from a go/no-go, inspect-everything approach to a more sophisticated, diversified system of shared control. The problem associated with this policy was that government personnel were given implied product approval. With in-house inspectors working alongside industry inspectors, products delivered to the Government were considered by industry to have been approved by the Government. Thus, if products were later found to be inferior, the Government had little chance to recover damages.

Another problem experienced during this period was industry's reliance on government personnel to perform contractor quality control requirements. The Defense Acquisition Regulation (DAR), clause 7-1902.4, titled Inspection of Services, usually established quality control requirements for service contracts. A May 1977, USAF study found:

The Inspection of Services Clause --- requires the contractor to maintain an inspection system that documents the results of inspections performed and meets with the contracting officer's approval. Thus, contractor quality control is a contract requirement, as is serving meals, operating vehicles or sweeping floors. Discussion with MAJCOM (Major Command) personnel indicated that this contract requirement is not generally enforced at most installations. The CESMET (Civil Engineering and Services Management Evaluation Team) procurement representative has indicated that he has found this particular provision aggressively enforced in only two contracts during his visit to over 50 bases. Thus, service contractors are not providing a major portion of the management services required by the contract. Many of these contractors rely on Government personnel to provide them inspection results and only then do they initiate corrective action (10:23-24).

Similar findings have been uncovered elsewhere. At Vance Air Force Base where the Government contracts extensively for services, government surveillance reports disclosed that these contractors depended heavily on service personnel to perform quality control requirements. Specifically, the contractor

looked to the Government to identify work deficiencies and corrected only those which the Government identified in writing (3:10).

The final stage of government quality evolution was reached in the late 1970's when we moved from a control system to that of quality assurance. The quality assurance concept presumes that if the contractor's quality system is adequate and operating within the prescribed limits, the end product will also be adequate. Of course, there are inherent risks. For instance, it cannot guarantee that the government quality assurance personnel will detect every nonconformance (1:28). What this approach does allow is a more effective use of the some 6,000 quality inspectors located throughout the Air Force (11:11). Government policy for quality control remains the same; that is, the contractor will perform product or services quality control. The government representative's principle job is to exercise surveillance of the total system and not inspect physical characteristics of each unit or service delivered (1:28).

#### The Service Industry and Quality

The government's policy of industry providing product quality control is dictated by the sheer enormity of services contracted. Most service contracts for base support functions are provided by small, sometimes inexperienced firms. These firms frequently do not have the expertise to conduct quality control programs. Likewise, inexperienced contractors often do not read or understand provisions of a contract outlining quality control or other requirements (11:8).

Attempts to remedy these problems have been instituted by the use of performance contracts. These contracts have a statement of work (SOW) which clearly defines or states the minimum requirements of the Government (11:27). In addition, the firm is required to submit a written quality program, which must be approved by the contracting officer, before contract initiation. When the Government is satisfied that the contractor proposed quality control program promises to promote satisfactory performance, the contractor is notified in writing that the system is acceptable. However, the Government typically attaches the condition that if the contractor subsequently exhibits unsatisfactory performance, approval of the quality control system will be withdrawn (11:16). This suspension of the contractor remains until a new plan is submitted and approved.

Inexperienced and incapable contractors still thrive on

government business. It's a catch-me-if-you-can business, and many are counting on the low probability of being caught. Contractors know the regulations under which we perform as well as we do. They know that AFR 400-28 requires random sampling for quality assurance when using Performance Work Statement contracts. The odds are in their favor that they won't be caught. If we do catch them on occasion, they quickly and graciously correct the deficiency, thus allowing them to continue in the business of catch-me-if-you-can.

#### Summary

Through the years the Air Force, as well as the entire Department of Defense, has been endeavoring to develop a method which ensures a quality contractor product. During the early years, the Air Force copied industry's quality control concept and sent its inspectors out to the contractor sites to help them check their services. This method resulted in implied approval of contract performance; it provided a supplemental, free staff to contractors; and resulted in many undetected deficiencies. The quality assurance concept provided better utilization of the labor force and is now an integral part of present day contracts. Unfortunately, government employees are still checking individual services rather than checking the contractor's quality control program. Thus, a "rose by any other name" is still the original quality control approach. Contractors continue to check quality and point out deficiencies. Unchecked, they conduct business as usual. All too often the end product is unacceptable service.

## CHAPTER IV

### AIR FORCE REGULATION 400-28

Air Force Regulation 400-28, Base Level Service Contracts, was approved for use in 1979. The document focuses on actions the Government can take to enhance quality performance. Two key provisions of the regulation are the statement of work (SOW) development and quality assurance surveillance plans.

The regulation was developed and tested during 1978 and 1979 in service contracts awarded by the Maxwell Air Force Base, Alabama, Contracting Office. Results of the test were extremely favorable. The Government found that contractors were responsive in correcting problems when price reductions were exercised (11:26). The Transportation Personal Property Division of Maxwell found carriers with whom they dealt were more cooperative when suggestions to improve marginal performance were made (14:--).

AFR 400-28 states that to receive quality service from a contractor, the Government must be able to define and measure the degree of quality it wants. The regulation proposes this can be done through developing a good contract statement of work and quality assurance surveillance plan (11:26-27). While the regulation has made enforcement of contract provisions easier, it has entrenched many of the old provisions which hamper our ability to identify problems.

#### Statement of Work

Introduced in an earlier chapter, the Standard Inspection Clause requires the contractor to maintain an inspection system acceptable to the Government. The term acceptable is not defined by government specification and, as pointed out earlier, usually fosters a dependence on service contractors for government quality control.

To combat this problem, the Contract Statement of Work was developed. The intent of the document is to develop legally enforceable contract language which clearly states the minimum requirements of the Government for the services

being contracted (11:27). It is a statement by the Government which emphasizes performance, not procedure. In simple language, it says we don't care how you get the service member's personal property from Base A to Base B, as long as it arrives by the required delivery date with a minimum of damage. (Damage factor would be predetermined.) Stated another way, we're telling the carrier we don't care if he uses a mule train or a modern tractor trailer, as long as he meets our performance requirements of on-time pickup delivery by the required delivery date and minimal handling and shipment damage.

Statement of work development results from an exercise called job analysis. Work emphasis is to divide a function (service) into elements and sub-elements which produce the end product. By doing this, one determines to what extent each contributes to the product or service to be performed. Performance standards are set for each, and methodology is developed to measure the output. The final process sets acceptable quality levels. Usually stated as a percentage of a contract fee, these become the basis for recouping monies for non-performance or performance judged unsatisfactory by government quality assurance inspection (11:28).

#### Quality Assurance Surveillance

The main concept behind any quality assurance plan is to devise a system of inspection, tied to the performance indicators of a statement of work, which will verify a contractor's output or services meets established quality standards (9:5). Those standards are most often stated in quantifiable terms. For example, an on-time pickup of personal property to a quality assurance inspector would mean the carrier arrived between 7 a.m. and 9 a.m. on the date specified. These performance indicators could be found in the contract statement of work. Further, parts of this inspection would be to insure the carrier personnel were knowledgeable of their duties, that the proper cartons were on hand and used for their intended purpose, that the equipment used was serviceable, etc. All these items contribute to the movement service and each is traceable to the SOW. Each would be a performance indicator. A problem with this method of operation is it places the Government back in the position of providing quality inspection for the contractor. Worse, the system is reactive, not pro-active. Everything is assumed in order unless government personnel show otherwise. Information available indicates that little has changed in the personal property movement business, especially when damage is used as an indicator (15:--). What has changed is our ability to recover when damages are found.

### Legal Enforcement

Contracting officers and transportation managers alike will agree that Performance Work Statement contracting (Comprehensive SOW and QA Surveillance Plan) has finally led the Government to a legally enforceable document. They can point to damages collected at the local contracting level for substandard performance which once would have required legal action, and because of our methods of doing business at that time, the Government would most likely have lost (13:--). Although not statistically supported by this author, conversations with personnel in the transportation movements business confirm our successes in contract enforcement. But these successes are only those uncovered by our inspectors. One must ask, based on past contractor performance, how much goes undetected and unenforced?

### The Quality Assurance Plan in Action

Most surveillance plans cite four sources of information which may be used for contractor surveillance: management information systems (e.g., recorded performance statistics), random sampling, surveillance checklist and customer complaints (11:30).

At the base level, where surveillance is conducted, there are drawbacks associated with two of these. Management information is usually provided by the contractor. It may not be timely, can add expense to a service if required by the contract, and may be biased. Customer complaints, on the other hand, could be invaluable to the local inspector, as they are considered unbiased sources of information. Unfortunately, experience shows customer complaints are often vague and unquantifiable. Thus the information cannot be tied to a specific performance indicator in the contract for action. Also, using one author's statistic, fewer than 1 in 50 customers will make a complaint (4:22). This is hardly sufficient data to support a surveillance plan. The quality assurance officers are left with a random sample approach to support his/her surveillance plan.

### Random Sampling

Because of the problems associated with the other means of surveillance, random sampling has become the standard technique employed by the Air Force. Its key attributes are impartiality and formulation from an established military standard.

The basis for random sampling is MIL-STD-105 Q, Sampling Procedures and Tables for Inspection by Attributes. This standard has been in existence for many years and is widely understood by both government and contractor personnel. The concept of sampling by attribute is to match a feature of a service to a standard. The attribute will either meet or not meet the stated standard. Stated another way, attribute sampling is useful in describing how a job is done in terms of defects per hundred observations or percent defective (9:45). Using this concept, sampling for performance indicators specified in a statement of work is easily accomplished.

Impartiality is achieved through the mechanics of random sampling. These mechanics are spelled out in a sampling plan and usually consist of an acceptable quality level, lot size, sample size, and rejection level (9:46). Acceptable quality levels and rejection levels will be specified factors identified and agreed to in the contract. Lot sizes, usually determined from historical data, will determine sample size to be inspected during the period. This information is obtained from tables in AFR 400-28. The use of random numbers determines exactly who will be inspected from the lot. The use of this system ensures that each element has the same chance of inspection. Thus, all elements receive fair and equal consideration. It is the feature of impartiality, or fairness, which provides the program its legal clout.

## CHAPTER V

### IMPACTS OF PERFORMANCE WORK STATEMENT AT THE LOCAL LEVEL

Until now, discussion in this paper has centered on how the services conducted quality business in the past, problems encountered and the evolution to arrive at the current system. This chapter examines current issues, both positive and negative, associated with the present system. Further, the interrelationship of these issues with the goals of the total system will be examined. The emphasis of this examination is placed at the base level.

#### The Negative

After completing the successful test of performance work statement at Maxwell Air Force Base, Alabama, the Air Force phased in the program at all its bases. Since that time complaints have continued in three primary areas: loss of authority by local quality managers, program inflexibility, and increased paperwork requirements. These complaints span a period of some five years.

Under the program provided in AFR 400-28, a quality assurance manager is given little authority to act on initiative. In fact, he or she is provided a program which has been described as a system of filling in the blanks (15:--). This is a radical departure from past operating methods. It could probably be described better as a complete about-face.

Past operating practices placed total responsibility for program formulation and execution with the quality manager. The manager determined the who, what, where, when, how and why of the local program. Based on his intuition and experience, the program was changed whenever it was deemed necessary. Under AFR 400-28, management ability is reduced. It must function within very strict guidelines. Authority is often limited to mere modifications of dictated requirements to fit local circumstances. These variations must be approved by the local contracting officer. In comparison to the past operation, quality managers today could better be described as

quality supervisors, for their main purpose is to see that the program is executed as prescribed.

The second item of discontent with the new system is its rigidity or inflexibility. Many of the same arguments heard here were presented in the above paragraph. The system dictates actions, once the local system is initiated, quality inspector related that it was like coming to work with his hands tied behind his back. Experience counts for naught--just fill in the blanks and calculate the outcome (16:--).

The final area of discontent which persists today is that of the required documentation. The new system requires paper at every turn. Local quality assurance plans must be developed. In addition, there are the weekly and monthly inspection schedules, tally sheets, individual records, numerous letters, discrepancy reports and interoffice memorandums. Documentation of training for quality inspectors must be kept current. Every step along the way is documented to ensure that a complete audit trail is maintained.

This detailed documentation requirement was not necessary under past systems. Documentation was done on an as-needed basis. A good example is when an inspector observes a good move. Nothing out of the ordinary is observed; therefore, there is nothing to report. The outcome to this situation may have at best resulted in a verbal debrief to the supervisor. Seldom would a formal file have been made.

The old method is a result of our past inefficiencies. The lack of a standard approach, our inability to systematically approach inspection requirements, and the almost total disregard for documentation doomed our past system. Change was required and with change comes new problems and challenges. There is, however, a positive side to change. In fairness to the new system, it is felt that its features should be presented.

#### The Positive

Whether reviewing relevant written material or discussing the program with personnel in the business, Performance Work Statement contracting works and works quite well. It allows enforcement at the local level, provides for objective judgement by inspectors, is simple in design, produces cost savings,

and presents to the contractor a document which is easily understood.

Enforcement is paramount. No longer does the Government fear a lawsuit. In fact, due to the design of the contract, a lawsuit against the Government is almost a sure losing gamble. Everything in the performance work statement is agreed to, including penalty deductions, prior to contract execution. If taken to court, the system provides ample documentation to provide the Government a successful defense. Even the threat of action under these contracts can now show positive results. Described by one traffic manager, the system now provides a hammer at the local level. Cooperation from the contractor on other related matters is easily obtained (15:--).

Closely tied to enforcement is the requirement to have trained inspectors observing contractor operations. The old approach relied on on-the-job training and personal initiative. Assigned contractor performance ratings were based on the government employee's experience. The new system requires training and provides the inspector definitive guidelines by which he can draw final service grade determinations. Additionally, the inspector can now provide objective feedback to the contractor in terms defined in the contract and understood by both. Subjectivity is eliminated.

Cost savings evolve from our new system in several ways. First, there is the direct cost recovered through the contract. In the past, through manipulation and legal actions, most of these were avoided by the contractor. Second, a hidden cost savings is found because fewer cases are pursued through the courts. Finally, a savings in time at the local level is achieved. No longer are local inspectors drawn away from their duties to 'build a case' against a contractor who is providing substandard performance. The new system provides this information on a continuing basis.

The final positive attribute identifiable with the new system is the contractor's full knowledge of the required Air Force performance standards. Prior systems required the contractor to determine the quality standards which were desired. Therefore, each contractor obviously came to different conclusions. With the new system, standards are determined at contract initiation. The guesswork is removed. The benefits accrue to both the contractor and the Government as relationships are clearly defined for each.

#### Summary

With the initiation of new quality assurance programs

throughout the Air Force, new and persisting problems have surfaced. These negative aspects encountered at the local level are in direct conflict with positive gains achieved by the new program. Desired changes sought by quality assurance personnel threaten the gains which have been accomplished.

## CHAPTER VI

### CONCLUSIONS AND RECOMMENDATIONS

#### Conclusions

As a matter of policy, the Government places the requirement for quality control with the contractor when executing a contract for services. If quality standards are not met, the Government stands to lose money. This is especially true when related to the monies expended on personal property movements within the Department of Defense.

Since World War II the Government has tried several approaches in its attempt to ensure quality was received. Our inspectors worked in the plants checking every product. Technology improvements and fewer resources forced changes on the system. We became partners with industry inspectors, checking only parts of the system and its output. Our participation became a stamp of approval. Industry relied more and more on government inspectors to correct or point out their deficiencies. Resources continued to shrink, and fewer problems were uncovered. Quality was not what it should be, and our ability to do anything about it was in jeopardy. Contractors continued with business as usual, an attitude that the Government would inform them if anything was wrong.

Industry's attitude was not necessarily of their own doing. Government standards, or in this case, the lack of any definitive standards, were the problem. Contract language relating to quality was usually extracted from the Defense Acquisition Regulation. The provisions of this regulation merely required contractors to provide 'acceptable' service. Explanation of the term was not given. This ambiguity not only contributed to poor enforcement of quality by our contractors, it proved to be our undoing.

Without definitive standards, attempts by Government to control quality failed and failed miserably. In the

transportation industry one-third of all personal property shipments resulted in paid claims. Efforts at the local level to collect damages were almost futile. Our system provided a better legal defense to our contractors than ourselves. We could seldom win in court. The contractor would claim he had provided an 'acceptable' quality service, and this challenged the Government to prove that he had not. Because our contracting method left the definition of acceptable in the contractor's hands, we would lose. In the decade of the 70's the Department of Defense (DOD) and the Services attempted to reverse the downward trend in quality. The DOD instituted the Carrier Evaluation Program for quality control; the Air Force tested and implemented performance work statement contracting.

The Carrier Evaluation Program stopped the decline in quality by eliminating carriers from doing further business with DOD. In a deregulated market, however, new and often inexperienced companies quickly replaced those who were eliminated. Problems still existed at the local level. Our contracts were still not enforceable.

Performance work statement contracts were the answer. With these, the Government turned the tables of enforcement. Using a combination of a detailed statement of work outlining required performance and an aggressive quality assurance plan which checks the various performance indicators, performance work statement has removed the contractor's legal defense. The Government has now defined the term acceptable.

The performance work statement method has been termed a huge success throughout the Air Force. It has provided standardization to each installation. Implementation is eased due to the system's simple design. Personnel at local levels are provided the tools and information which allow objective rather than subjective judgements to be made. Contractors, having the same information, can easily correct quality deficiencies. Finally, the Government is recouping damages which in the past had been virtually forfeited.

With all that is good with the Air Force's new system, there have been complaints. Those which have persisted to date; loss of management authority, system rigidity, increased paperwork, strike at the very soul of the new system. The standardization and documentation are what make performance work statement function. However, complaints persist and ignoring them has not made them disappear. These problems affect the morale and efficiency of the local quality assurance personnel. These are the

same people on whom the Air Force depends to make the system function. It must be assumed that the system could be more effective if remedies to these problems are found.

#### Recommendations

Given there will be no significant change in government policy for quality control of service contracts, changes at the base quality assurance level must be accomplished within the current program. This system as it exists supports the current policy of a contractor providing quality control while various agencies, in this case the Air Force, provides oversight. Several solutions to those identified problems are offered below.

Introduction of AFR 400-28, the implementing regulation for performance work statement contracts, caused radical changes for those transportation quality assurance personnel providing the Air Forces's contract oversight. The regulation removed decision making authority by providing the 'how' in great detail. It virtually dictated the use of random sampling, a technique which inspectors felt ignored experience. The regulation deemphasized, intentionally or unintentionally, the human element. There is no evidence that personnel at the local level were involved in the 'why' of the new regulation. To combat this, an education program is recommended. This program could be in the form of a Department of the Air Force video tape and should concentrate on three subjects. First, provide a thorough explanation outlining why a change in operating procedures was necessary. Next, the significance base level personnel play in supporting government policy as it relates to quality control should be presented. Finally, the successes of the new program versus the failure of the old should be emphasized. The benefits of the video should be to improve awareness of local personnel that their contribution has made a difference in the success of the program at the local as well as national levels. This would be the first step toward improving morale.

Following closely behind the release of the video tape should be a program instituting regional workshops. Meeting quarterly, local traffic managers and quality assurance personnel would be able to exchange management philosophies, discuss problems, and share their experiences. Minutes from these meetings should be exchanged with other regions, thus attaining a national coverage. The emphasis

here is to further involve our managers in the idea that they make the program work, that the system is manageable, and that they are in charge of the system.

Rigidity and inflexibility in the program are almost entirely caused by random sample surveillance. In order to relieve some of the burdens caused by this, a customer surveillance system appears warranted.

Customer surveillance would be a new method of surveillance. It would not replace random sampling or formal customer complaints. As a surveillance system, it would not be in conflict with federal procurement policy. This policy states customer complaints are not truly random; therefore, they cannot be used in and of themselves to reject services or deduct money from a contractor (9:45). This method of surveillance would have to be a system providing 100 percent coverage. Because of this, it is expected to apply to only one of the primary areas of movement: local drayage, inbound, outbound. Depending on local traffic volume, it may be possible to handle a combination of two of the above. An example of this would be to use customer surveillance for all inbound domestic traffic and local drayage movements. Whatever the combination, incorporating this system in conjunction with random sampling would significantly reduce scheduling and inspection requirements at the local level. Thus, it would remove some of the rigidity from the program while adding some new flexibility.

The system would work something like this. During the customer's premove counseling, he would be thoroughly briefed on the program. The briefing would cover an explanation of the program, the customer's part in the program, how to complete and return the required forms, and a point of contact should problems be encountered. A suspense system would be established to monitor the return of all forms. This would be the responsibility of the premove counselors. Three days is considered sufficient.

The forms provided would be a questionnaire which required 'yes' or 'no' responses to the question being asked. The questions would only deal with observations a layman could make. Most important, these questions would relate directly to performance indicators in the performance work statement. A few examples might be: Did the contractor arrive between 7a.m. and 9a.m.? Did the contractor's representative conduct a thorough inventory with you? Did the contractor's representatives service all your appliances? Were you required to assist the contractor's

representatives in servicing your appliances? Did the contractor complete the job by 5p.m.? Each of these questions is directly related to a performance indicator. Each question can easily be answered 'yes' or 'no' by a layman.

The final portion of this system would be conducted by the local quality assurance inspector. Once the completed questionnaire is received, the information from it would be combined with information the local quality inspector had compiled from paperwork provided by the contractor. These would be items such as required delivery or pickup dates, weight slips and reweigh slips. This combined information would then be used to check compliance in much the same manner as used for random sampling. This is possible because each system uses responses tied to the performance indicators of the contract. The beauty of the system is that surveillance can be conducted with a high degree of coverage and the inspector does not leave the office. It will provide a new flexibility in scheduling and time management at the base level.

Finally, what to do about all that paperwork? The strength of the performance work statement is the ability to document weaknesses in services rendered through identifiable, quantifiable parameters. In simple terms, how far was the contractor from the agreed level of compliance for particular performance requirements. To accomplish this, a tremendous network of plans, schedules, inspection forms, tally sheets, and files have been created at the local level. Each office has been left to wrestle this paper giant as best they can. With the ingredients provided by performance work statement contracts, office automation is the solution.

Many of the items indicated above offer great opportunity for computerization. Scheduling is obvious. Inspection forms could become mark-sense forms. A simple scan by the computer could record the information into a file, compare the data against the established parameters and provide the inspector an output of the results for reviews. A confirmation by the inspector of discrepancies could then be entered into the computer. This would provide several functions. First, it would update the file. Next, it would cause letters to be generated to notify the contractor and the local contracting officer. Last, it would set a suspense for corrective action by the contractor and would update the office inspection schedule if follow-up inspection were considered necessary. Application within this system appears extensive.

The example above is limited. This author is not a computer expert and a system of this complexity would require

such expertise. Therefore, it is recommended that the Department of the Air Force form such a team of experts to work with a selected base transportation quality assurance office to develop an exportable office automation system. This would include hardware selection, software development, output requirements, and any necessary training packages that would be needed to introduce the system to the field. Once fielded, a follow-up program should be undertaken to identify any modifications or changes required. This will make the transition easier and ensure acceptance at the local level. The success of such a program is sure to improve morale, provide new management capability, and add additional flexibility for personnel working at the local level.

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